

INTERNATIONAL SEARCH REPORT

International application No.

PCT/USO3/346Q0

A. CLASSIFICATION OF SUBJECT MATTER

IPCC7 : B66B 1/34

US CL : 187/394

According to International Patent Classification CIPCI or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 187/394,391,393,282,28,3

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base searched during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERS TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant ID claim No.
Y	US 5,682,024 A (KOOPMAN Jr. et al) 28 October 1997 (28.10.1997), see entire document.	1-17
Y	US 5,783,784 A (DUEAND) 21 July 1998 (21.07.1998), see entire document.	1-17
A	US 2005/0039987 A1 (IEDDBN) 24 February 2005 (24.02.2005), see figure 3.	1-17
A	US 2005/0230193 A1 (CH et al) 20 October 2005 (20.10.2005), see figure 1.	1-17

D Further documents are listed in the continuation of Box C,

See patent family annex.

* Sp. Li. I category; of cited document	"T"
"A" document defining the general subject matter in which is not considered to be of particular relevance	"T" document published after the international filing date or priority date and not in conflict with the application but not in substance the principle or theory underlying the invention
"E" earlier application or patent published in whole or in part after the international filing date	"X" document of particular relevance; the claimed invention is considered novel or inventive step when the document is taken into account
"I" document which may throw doubt on priority claim(s) or which it did to HUBBIS) or by the date of publication or other special provisions	"V" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other prior art documents, such as the document being obvious to a person skilled in the art
"O" document referred to in the international search report, or in the international preliminary report on patentability, or in the international search report on the patentability of the invention	"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

01 February 2006 (DI.02.2006)

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